

ABSTRACT

A broadband communication system having a first broadband communication ground station, a second broadband communication ground station, and a satellite constellation. The satellite constellation is used for conducting bi-direction broadband communication between the first broadband communication ground station and the second broadband communication ground station. At least one satellite of the satellite constellation has an inclined eccentric orbit in a first orbit plane. The satellite constellation is disposed in orbit so that when observed from a predetermined ground observation point a number of satellites, including the at least one satellite, in the constellation appear to follow a substantially common path which extends through a predetermined active zone. The number of satellites moving along the common path is such that the predetermined active zone has one satellite from the number of satellites continuously located therein. The at least one satellite, and at least another satellite from the number of satellites are launched into a common initial orbit plane which is different than the first orbit plane.

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